IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POLAROID CORPORATION	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 06-738 (SLR)
	)	
HEWLETT-PACKARD COMPANY,	)	
	)	
Defendant.	)	

JOINT CLAIM CONSTRUCTION STATEMENT
CORRECTED

Pursuant to Paragraph 9 of the Amended Scheduling Order entered on September 6, 2007

plaintiff Polaroid Corporation ("Polaroid") and defendant Hewlett-Packard Company ("HP") submit this

Joint Claim Construction Statement identifying for the Court the elements of the claims in U.S. Patent

No. 4,829,381 that require construction, including each party's proposed constructions, and constructions

to which the parties have agreed.

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Claim Term	Polaroid's Claim Construction	Hewlett-Packard's Claim Construction
continuously enhancing [Claims 1 and 7]	The preamble of claims 1 and 7 are not limitations because they merely state the purpose/intended use of the invention set out in the claim body. If the Court rules that the preamble is a limitation, *"continuously enhancing"* should be construed to mean "**successively transforming**."	**successively transforming**
electronic information signals [Claims 1 and 7]	*"electronic information signals"* should be construed to mean "**signals providing pixel information, such as color, luminance, or chrominance values**."	**signal(s) providing luminance pixel information**
electronic image data received in a continuous stream of electronic information signals [Claims 1 and 7]	The preamble of claims 1 and 7 are not limitations because they merely state the purpose/intended use of the invention set out in the claim body. If the Court rules that the preamble is a limitation, the phrase *"electronic image data received in a continuous stream of electronic information signals"* should be construed to mean "**electronic data received in a successive series of signals providing pixel information, such as color, luminance, or chrominance values**."	**an uninterrupted stream of received luminance image data [pixels] defining an original image to be recorded**
each signal having a value within a determinate dynamic range of values [Claims 1 and 7]	The preamble of claims 1 and 7 are not limitations because they merely state the purpose/intended use of the invention set out in the claim body. If the Court rules that the preamble is a limitation, the phrase "*each signal having a*	**each received pixel has an associated luminance value that lies within a predetermined group of luminance values**

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	value within a determinate dynamic range of values" should be construed to mean "**each signal being associated with a value that lies within a range of possible values bounded by definite limits**."	
means for averaging electronic information signals corresponding to selected pluralities of pixels and providing an average electronic information signal for each said plurality of pixels so averaged [Claim 1] This claim element is a means-plus-function element under 35 U.S.C. § 112, ¶ 6.	The **function** of this means-plus-function element is averaging electronic information signals corresponding to selected pluralities of pixels and providing an average electronic information signal for each said plurality of pixels so averaged. The terms used to describe the function should be construed as: *"averaging"* should be construed to mean "**calculating an intermediate value for**." *"electronic information signals"* should be construed to mean "**signals providing pixel information, such as color, luminance, or chrominance values**." *"average electronic information signal"* should be construed to mean "**signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value**." The corresponding **structure** is a low pass filter or block average and equivalents thereof.	**Function:** providing an average for selected pixel values around one pixel, where the average is correlated to each pixel making up the average. **Disclosed Structure**: a block averager 12 with a buffer memory that takes luminance as an input and outputs an average luminance value that is correlated to each pixel in the block, and equivalents thereof.
averaging [Claims 1 and 7]	*"averaging"* should be construed to mean "**calculating an intermediate value for**."	**taking an arithmetic mean of** or

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average [Claims 1, 2, 7 and 8]	"*average*" should be construed to mean "**of calculated intermediate value**."	**an arithmetic mean**
average electronic information signal [Claims 1, 2, 7 and 8]	"*average electronic information signal*" should be construed to mean "**signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value**."	*No construction necessary.* Alternatively: the average of the electronic information signals.
means for selecting one of a plurality of different transfer functions for the electronic information signal for each of the succeeding pixels in a manner whereby each transfer function is selected as a function of the electronic information signal for one pixel and the average electronic information signal for the select plurality of pixels containing said one pixel and for subsequently transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel wherein said selecting and transforming means further operates to select said transfer function as a function of the ratio of the value of the average electronic information signal to the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal [Claim 1]	The **function** of this means-plus-function element is selecting one of a plurality of different transfer functions for the electronic information signal for each of the succeeding pixels and for subsequently transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel wherein said selecting and transforming means further operates to select said transfer function as a function of the ratio of the value of the average electronic information signal to the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal. The terms used to describe the function should be construed as: "*transfer function*" should be construed to mean "**function that transforms an input signal**." "*electronic information signal*" should be construed to mean "**signal providing pixel information, such as a color, luminance, or**	**Function:** selecting a transfer function for each incoming pixel based on the pixel value and its corresponding average electronic information signal, and based on the result of dividing a first existing data value representing the average electronic information signal by a second existing data value representing the dynamic range of the average electronic information signals. **Disclosed Structure: none (*indefinite*),** alternatively: a gamma determining circuit 14 containing a multiplier circuit 18, a combining circuit 20, a second combiner circuit 22, a log circuit 24, a multiplier circuit 26 and a antilogarithmic determining circuit 28 – all arranged according to Fig 4, which computes gamma based on the formula $\gamma = (1+C)^{(A_v/M-1)}$, where A_v is average luminance of the input, C is a constant and M equals one half of the dynamic range. and the transfer function imposing circuit 16 containing a logarithm determining circuit 30, a combiner circuit 32, a multiplier circuit 34, a

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This claim element is a means-plus-function element under 35 U.S.C. § 112, ¶ 6.	**chrominance value**.” *"ratio of the value of the average electronic information signal to the dynamic range of the electronic information signals"* should be construed as “**ratio of that calculated intermediate value over a value that lies within the range of possible values**.” *"average electronic information signal"* should be construed to mean “**signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value**.” The corresponding **structure** is an algorithm $Y_{out} = Y_{MAX}(Y_{in}/Y_{MAX})^{\gamma}$, where $\gamma = (1 + C)^{(Av/M - 1)}$, where Y_{out} is the transformed signal providing pixel information, such as a color, luminance, or chrominance value, Y_{MAX} is the highest value of the dynamic range, Y_{in} is the input signal providing pixel information, such as a color, luminance, or chrominance value, C is a chosen number, Av is a calculated intermediate value, and M is any value within the dynamic range, and equivalents thereof.	second combiner circuit 36 and an antilogarithm determining circuit 38 – all arranged according to Fig 4, which computes an output luminance: $Y_{Out} = Y_{Max}\left(Y_{In}/Y_{Max}\right)^{\gamma}$, where Y_{Out} is the output luminance value, Y_{Max} is the maximum value in the dynamic range (255), Y_{In} is the input pixel value, and γ is the “means for selecting a transfer function” and equivalents.
transfer function [Claims 1 and 7]	function that transforms an input signal (the parties agree)	
dynamic range of the electronic information signals [Claim 1]	*"dynamic range of the electronic information signals"* should be construed to mean “**value that lies within the range of possible values**.”	**an integer representing the number of possible pixel values;** for an 8-bit system, 256
ratio of the value of the average electronic	*"ratio of the value of the average electronic*	*No construction necessary*. Alternatively: the

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information signal to the dynamic range of the electronic information signals [Claim 1]	*information signal to the dynamic range of the electronic information signals"* should be construed as "**ratio of that calculated intermediate value over a value that lies within the range of possible values**."	result of dividing a first existing data value representing the average electronic information signal by a second existing data value representing the dynamic range of the average electronic information signals
dynamic range [All Claims]	Not indefinite	*indefinite*
low scene light intensity levels [Claims 2 and 8]	Not indefinite	*indefinite*
lowest scene light intensity levels [Claims 2 and 8]	Not indefinite	*indefinite*
high scene light intensity levels [Claims 2 and 8]	Not indefinite	*indefinite*
highest scene light intensity levels [Claims 2 and 8]	Not indefinite	*indefinite*

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wherein said selecting and transforming means further operates to select said transfer function as a function of a determined constant whose value corresponds to the amount of contrast provided in those areas of higher contrast provided by said select transfer function. [Claim 3] This claim element is a means-plus-function element under 35 U.S.C. § 112, ¶ 6.	The **function** of this means-plus-function element is selecting one of a plurality of different transfer functions for the electronic information signal for each of the succeeding pixels and for subsequently transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel wherein said selecting and transforming means further operates to select said transfer function as a function of the ratio of the value of the average electronic information signal to the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal, said selecting and transforming means further operates to select said transfer function as a function of a determined constant whose value corresponds to the amount of contrast provided in those areas of higher contrast provided by said select transfer function. The corresponding **structure** is a chosen number, C, and equivalents thereof.	**Function:** a control parameter **Disclosed Structure**: the control parameter C employed in the second combiner function within the gamma determining circuit and equivalents
determined constant [Claim 9]	No construction is required. To the extent the court deems a construction necessary, *"determined constant"* should be construed to mean "**chosen number**."	**a control parameter**
areas of higher contrast [Claims 3 and 9]	Not indefinite	*indefinite*

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selecting one of a plurality of different transfer functions for the electronic information signal for each of the plurality of succeeding pixels in a manner whereby each transfer function is selected as a function of the electronic information signal for one pixel and the average electronic information signal for the select plurality of pixels containing said one pixel [Claim 7]	This element should be construed as: "selecting one of a plurality of different transfer functions for the **signal providing pixel information, such as a color, luminance, or chrominance value** for each of the plurality of succeeding pixels in a manner whereby each transfer function is selected as a function of the **signal providing pixel information, such as a color, luminance, or chrominance value** for one pixel and the **calculated intermediate value** for the select plurality of pixels containing said one pixel"	**each input pixel has an associated transfer function out of different transfer functions, and the transfer function is selected based on the input pixel value, and the average that was formed using the input pixel value, where each input pixel is part of only one average.**
a select proportionate value of the dynamic range of the electronic information signals [Claim 7]	*"select proportionate value within the dynamic range"* should be construed to mean "**value within the range of possible values.**"	**any value within the determinate dynamic range of values, selected depending on where the least image enhancement is desired.**
transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel wherein said transfer function is selected further as a function of the ratio of the value of the average electronic information signal to a select proportionate value of the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal. [Claim 7]	This element should be construed as: "transforming the **signal providing pixel information, such as a color, luminance, or chrominance value** corresponding to each pixel by the transfer function selected for that pixel wherein said transfer function is selected further as a function of the **ratio of that calculated intermediate value over a value that lies within a range bounded by definite limits** such that the ratio increases in correspondence with the increase in the value of the **calculated intermediate value**"	**each input pixel value that has been part of the averaging step is altered based on the corresponding average electronic information signal to which it is associated and based on the result of dividing a first existing data value representing the average electronic information signal by a second existing data value representing a select proportionate value of the dynamic range of the average electronic information signals.**

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on December 20, 2007, I electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

> William J. Marsden, Jr.
> FISH & RICHARDSON P.C.

I also certify that copies were caused to be served on December 20, 2007 upon the following in the manner indicated:

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